Ryan ALM
Asset/Liability Management

Cash Flow Matching Benefits

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Cash Flow Matching – Provides Liquidity

The intrinsic value of bonds is the **certainty of their cash flows!** If bonds were used to cash flow match and fund net liabilities (benefits - contributions) *chronologically* they would produce the liquidity needed to fully fund such net liabilities. Cash flow matching works best with longer coupon bonds where you use semi-annual interest income to partially fund liabilities. A 10-year bond has 20 interest cash flows + one principal cash flow all priced at a 10-year yield. This would eliminate the need to do a *cash sweep* of other asset classes which is a common liquidity procedure. According to S&P data, the S&P 500 has 48% of its historical returns from dividends and reinvestment since 1940 on a 10-year rolling period basis. Wouldn't you want to reinvest dividends back into growth assets rather than spend it on funding benefits + expenses?

Cash Flow Matching - Provides TIME

Ryan ALM, Inc. released a 2022 research report titled "Most Important Asset of a Pension… Time!" (www.RyanALM/Insights-WhitePapers) By using bonds as the liquidity assets, the growth assets are left unencumbered to grow. The longer the cash flow matching period, the more time the growth assets have to compound their growth. This could significantly enhance the ROA. By cash flow matching net liabilities chronologically, Ryan ALM can buy the time a plan sponsor and their consultant feel is necessary for the growth assets to grow unencumbered… and recover from negative return years. When markets correct and go down (i.e. 2022) it may take several years to recover and achieve the average annual target ROA that was assigned to that asset class.

Cash Flow Matching – Provides Inflation Hedge

Ryan ALM released a 2020 research report and pension alert titled "Pension Inflation =/= CPI" (www.RyanALM/Insights-WhitePapers). Pension inflation has three parts: a cost of living adjustment (COLA) benefit increase for retired lives; a salary increase factor for active lives and a forecast of administrative expenses. The COLA may be based on the CPI but with a floor and a cap or even a % of the CPI while the salary and administrative expense increases tend to be quite static @ 3% annual increase. As a result, pension inflation tends to be less volatile and more static than the CPI. The plan sponsor **actuary includes pension inflation in their projected benefit + expenses payment schedule** for both retired and active lives. This fact suggests clearly that the best way (and only way) to hedge pension inflation is to cash flow match the actuarial projected benefits + expenses. If you cash flow match the actuarial projections, you have defeased liabilities and hedged pension inflation.

Cash Flow Matching – Outyields Benchmark and Bond ROA

The Ryan ALM cash flow matching product (Liability Beta Portfolio or LBP) is heavily skewed to A/BBB corporate bonds while the BB Aggregate is heavily skewed to Government bonds. As a result, the LBP will outyield the BB Aggregate by a significant yield spread… usually 50 – 75 bps.

Higher Yields are Good for Cash Flow Matching… and Pensions

Ryan ALM released a topical 2022 research report titled "Why Higher Rates are Good for Pensions"(www.RyanALM/Insights-WhitePapers). **Pension funds are highly interest rate sensitive!** Certainly, fixed income assets are such that the longer their maturity and effective duration, the greater their interest rate sensitivity. But it is pension liabilities that are more interest rate sensitive. Liabilities behave like a 100% zero-coupon bond portfolio because the discount rate(s) chosen price liabilities as zero-coupon bonds. This causes liabilities to be longer in duration then the same maturity(s) coupon bonds. Many discount rates are a yield curve of rates (ASC 715, PPA, PBGC, IASB). As interest rates trend higher, bonds can cash flow match liabilities at lower and lower costs. Cash flow matching is focused on funding B + E which are future values. Future values are not interest rate sensitive. Bonds are the only asset class with the certainty of cash flows (future values). That is why bonds have always been used as the methodology for defeasance (cash flow matching) of liabilities. Moreover, if interest rates trend upward any reinvestment of cash flow can buy future value at a lower cost. As a result, **cash flow matching sees higher interest rates as an opportunity to reduce funding costs. The Ryan ALM cash flow matching product can reduce funding costs by @ 40% for most pension liabilities out to 10 years**. In contrast, bonds used as performance or growth assets could see negative returns… like 2022. Total return performance is not the value in bonds… the certainty of cash flow is the intrinsic value. We urge pensions to transfer their bond allocation from focusing on outperforming some generic bond index to focusing on cash flow matching liabilities *chronologically,* especially at today's higher rates.

Reminder: The ROA is Plural… ROAs

Ryan ALM, Inc. released a topical 2022 research report titled "The ROA is plural… ROAs" (www.RyanALM/Insights-WhitePapers) that details how the ROA is calculated. Each asset class is asked to earn the ROA assigned to them by using their index benchmark as the target return proxy. However, for fixed income it is the **YIELD** of the index benchmark… not the total return like other asset classes. The Bloomberg Barclay Aggregate is most favored as the bond index benchmark. This index and almost all popular bond index benchmarks were designed at Lehman Bros. by me (Ron Ryan) when I was the head of Fixed Income Research & Strategy from 1977 to 1982. Please note… each asset class is **NOT** required to earn the pension fund ROA assumption (@ 6.50% today). This is an important fact to remember in asset allocation. We at Ryan ALM often hear the criticism and question… how can we invest in 3% to 4% bonds to earn our ROA? The answer is bonds do **NOT** need to earn the pension ROA… just their assigned ROA (yield of index benchmark) in the asset allocation model.

"Where is the knowledge we have lost in information"
T.S. Eliot